

CONVENTIONAL MOSFET

FIG. 1

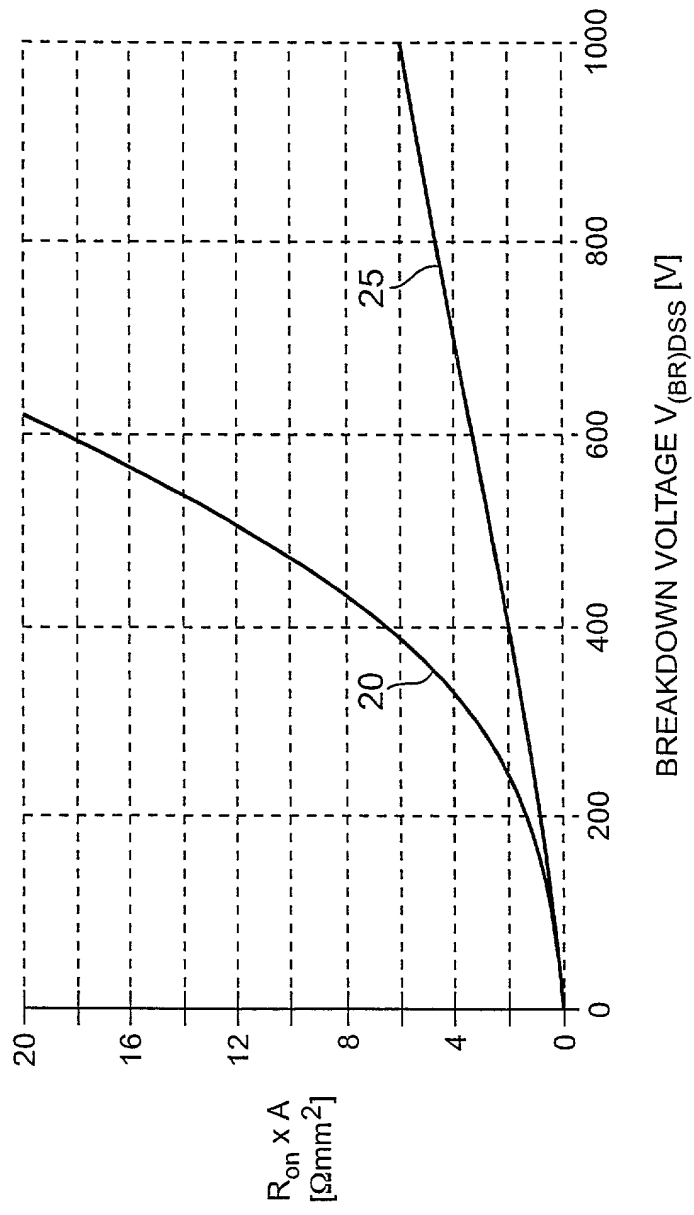
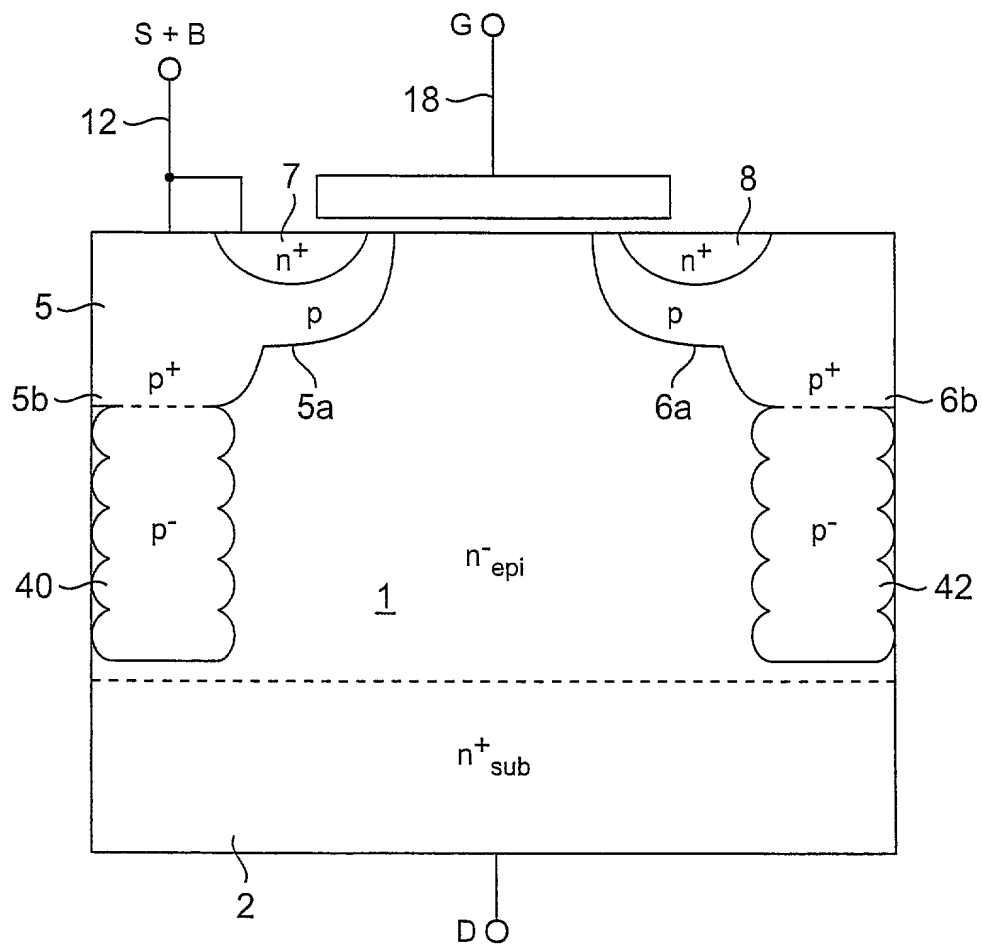


FIG. 2



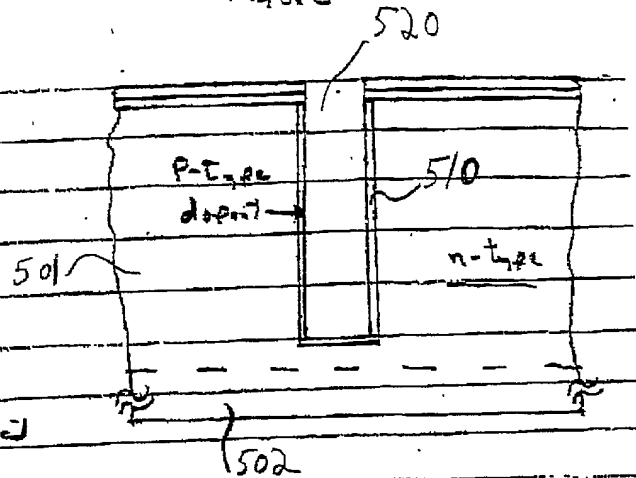
THE DOPANT DISTRIBUTION OF A HIGH VOLTAGE VERTICAL DMOS TRANSISTOR WITH A RELATIVELY LOW ON-RESISTANCE

FIG. 3

Step

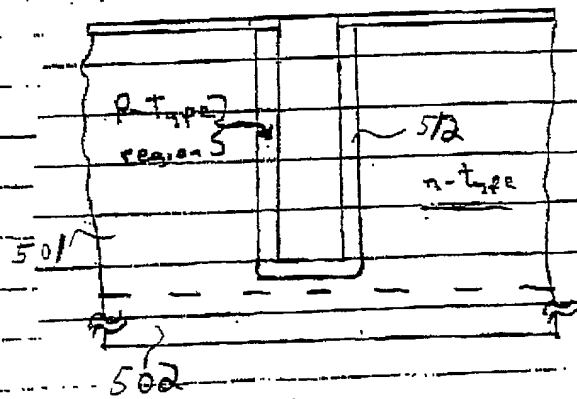
Figure

1. Grow/deposit a trench etch-stop layer.
2. Mask and etch the trench etch-stop layer.
3. Etch the trench using a gas that contains the desired dopant species.



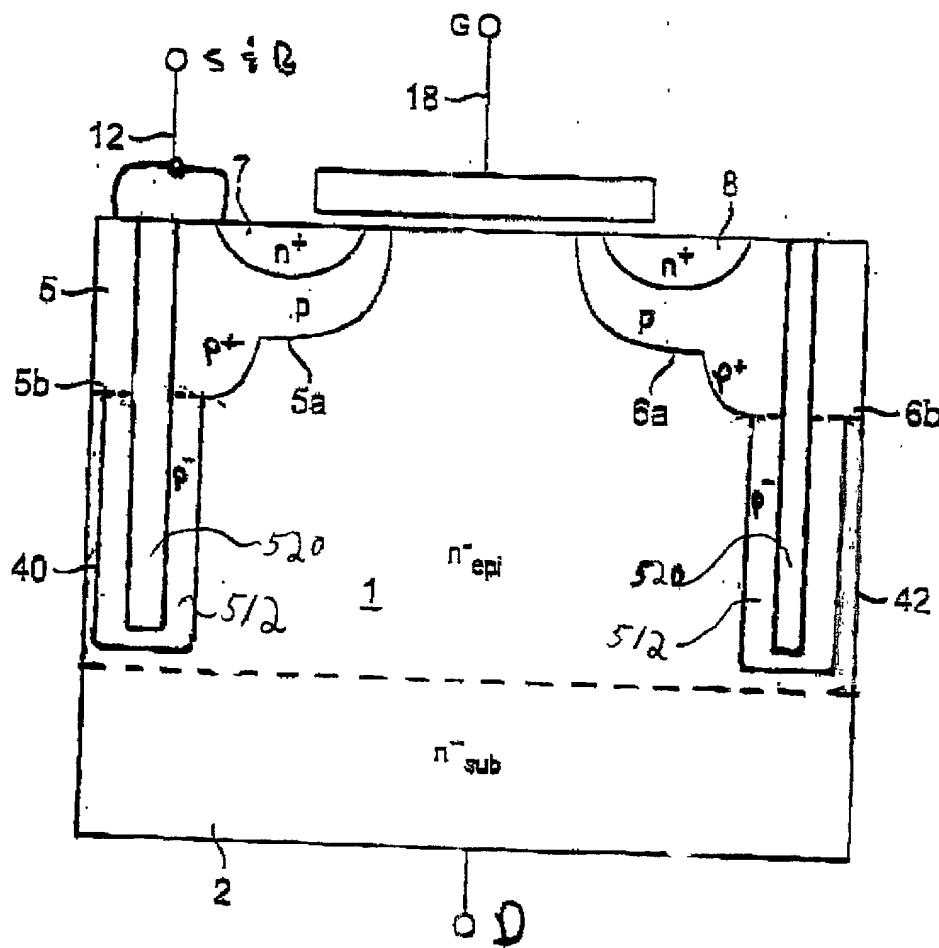
4 a

4. Fill the trench with a dielectric or a high resistivity layer.
5. Planarize.
6. Diffuse the dopant to form the desired junction.



4 b

Figure 4. The steps in the fabrication of the voltage sustaining junction.



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FIG. 5